

IMPLEMENTATION OF WORD PREDICTION IN MAINFRAMES.

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ABSTRACT

We all are familiar with prediction setting in our cell phones while texting or while working on Microsoft Office, but rarely we have seen this on Mainframe. Through this paper, we are proposing a solution to implement this feature in Mainframes. In our application, when we type up to three characters, and press the enter key, the matching words of first three characters, as given by the user are fetched from the database. Since only three places are provided in our application, so only three words of matching characters are fetched from the database. Also, if a word that doesn't exist in our database starting from the letters provided, then by pressing another key, we can insert the new word into our database.

Keywords: Word Prediction in CICS, Insertion of new word, Mainframe, CICS,

1. INTRODUCTION

Everyday a new invention is being done in Mainframes. Even though implementing new things in mainframe is a tedious task, but still people try doing it and get results out of it. Doing an exceptional task and successfully getting the results is a challenge in mainframe, but attempting the challenge of implementing new logic in CICS and getting successful results is an achievement.

Although word prediction is not a new concept that we haven't heard of, but for CICS its rare. Searching with the help of few characters and getting list of matching words, give users the ease for not typing the whole word. Also, if any word is unavailable in the database, then we can insert it by pressing another AID key for future reference. In this paper, we are proposing a solution to implement these features.

2. ALGORITHM

Below given are the steps and screen shots for implementing the WORD PREDICTION & INSERTION.

2.1 WORD PREDICTION

- Press the control button on the '0' value inside the switch provided.
- A new map will appear, changing the color of switch from red to green and numerical value from 0 to 1.
- Beneath that, a label is mentioned "Enter text". With that, a space is provided to enter the characters for searching. Enter up to three characters in the space provided and then press control button.
- Then, the available options matching the initial characters provided by the user would appear in the three spaces that are provided on the screen.

2.2 WORD INSERTION

- If the word entered by the user is not found in the database, then we can insert that word in our database by pressing F7 AID Key.

By pressing the key, new word is inserted into the database.

3. FIGURES AND TABLES

Fig 1.1 is the first screen showing the switch button in red color where cursor is at '0' value.

Fig 1.2 screen appears after pressing control button on the screen as shown in Fig 1.1. Here the color of switch changes from red to green and value from 0 to 1.

Fig 1.3 is the code for fetching matching words from the database.

Fig 1.4 is the code for inserting new words in to the database, if match not found.

Fig 1.5 screen shows word prediction as user entered 'SUN' in the field provided, and three matching words are fetched from the database and shown in the space provided.

Fig 1.6 screen shows that unavailable word has been inserted successfully in to the database.

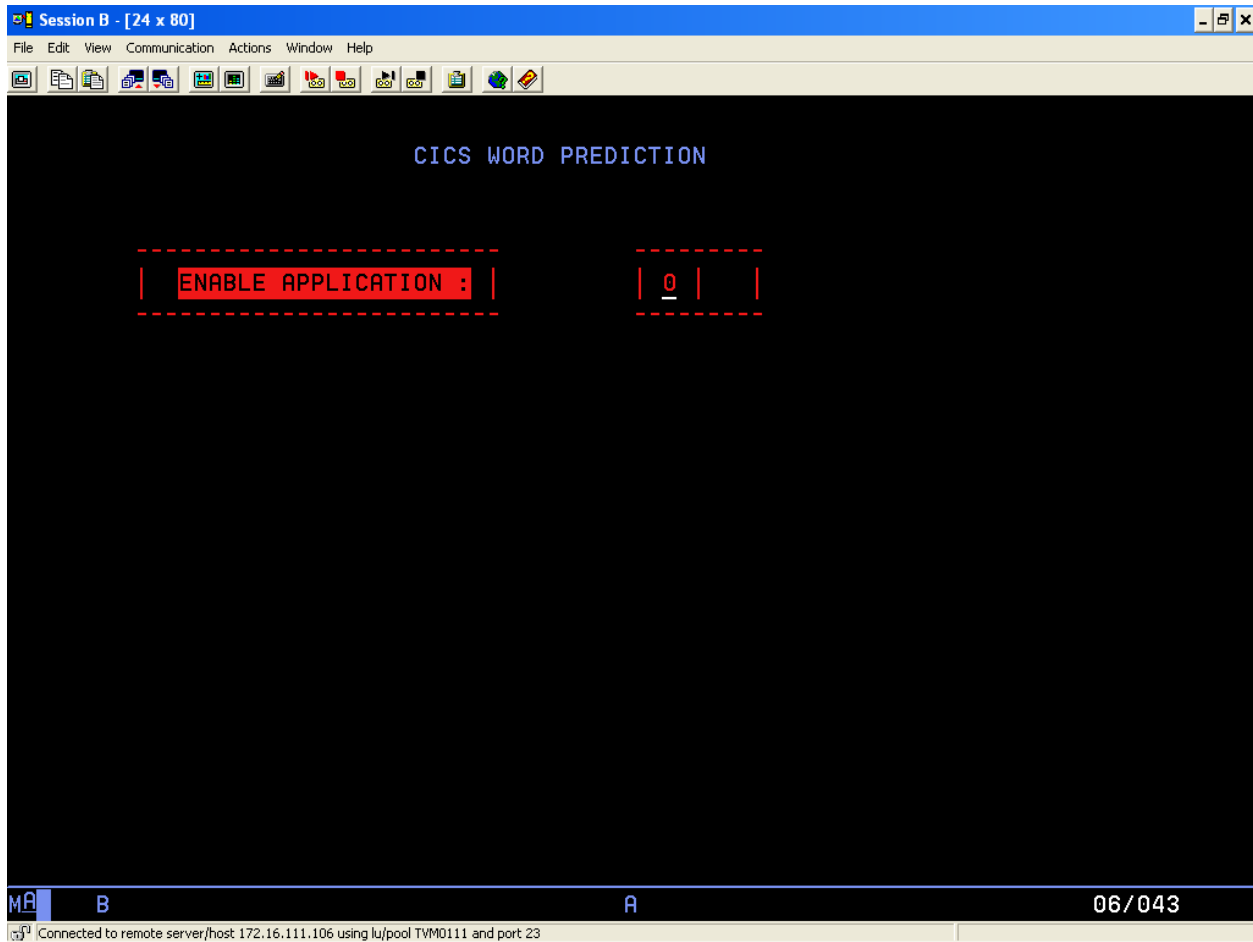


Fig 1.1: Screen showing OFF mode of the application

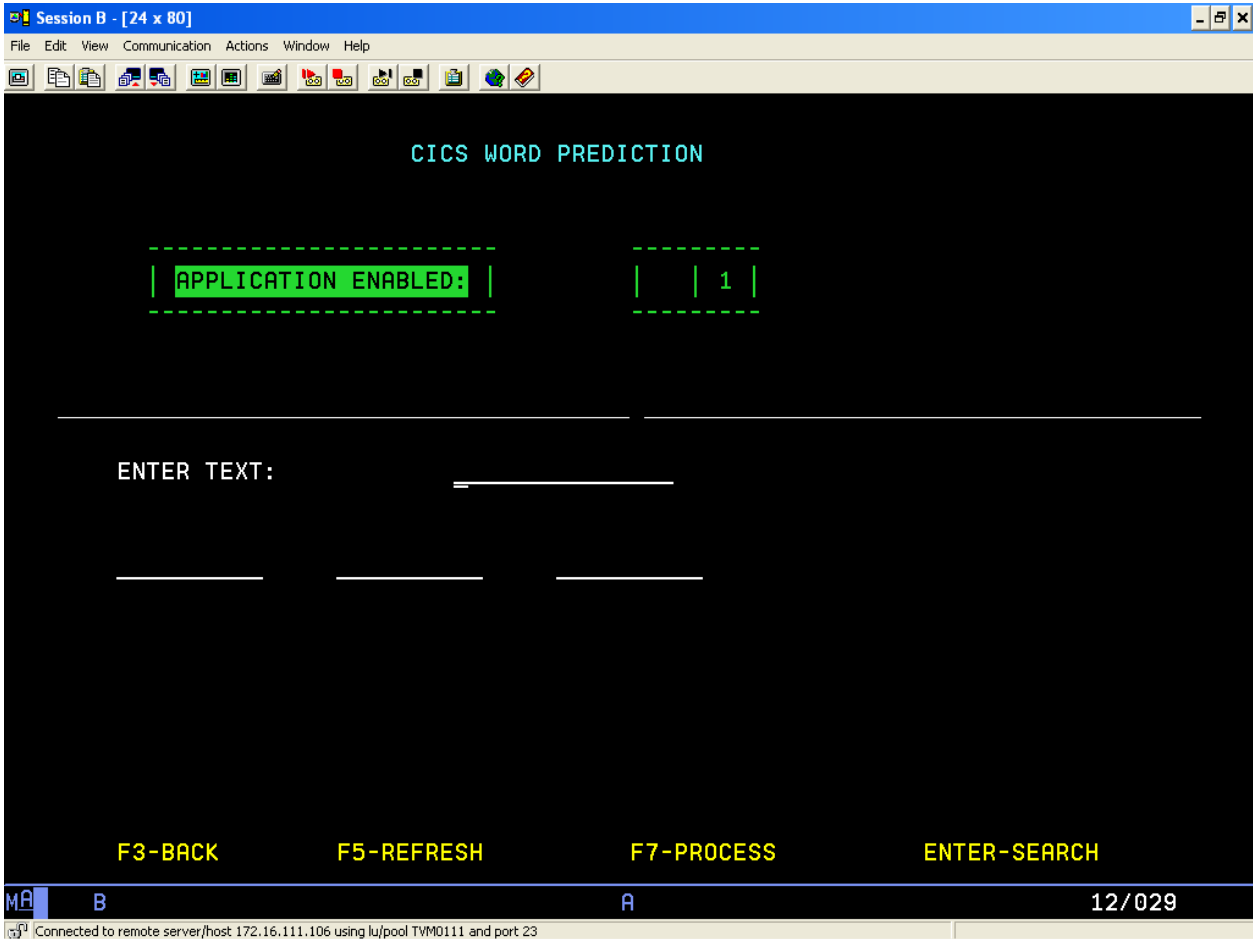
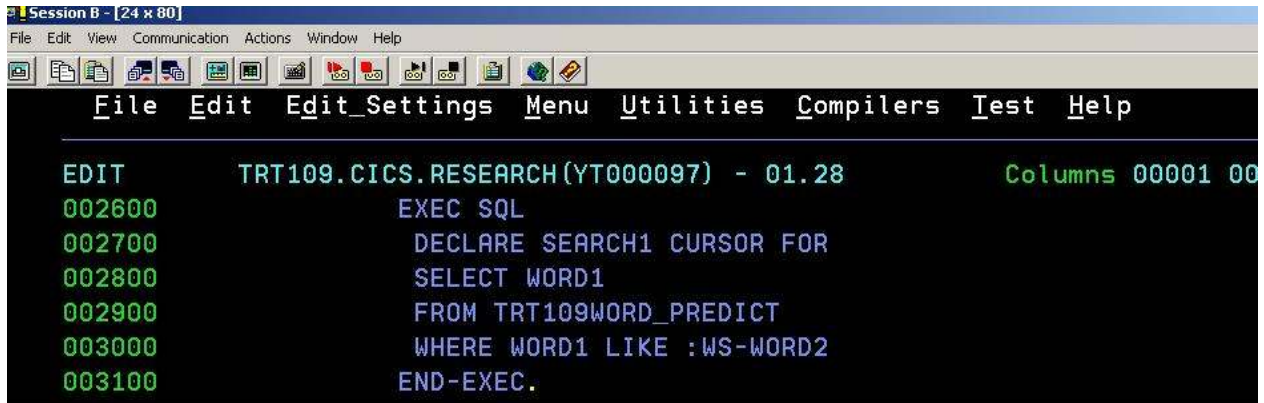


Fig 1.2: Screen showing ON mode of the application



The screenshot shows a terminal window titled "Session B - [24 x 80]". The menu bar includes File, Edit, View, Communication, Actions, Window, and Help. The main menu bar lists File, Edit, Edit_Settings, Menu, Utilities, Compilers, Test, and Help. The terminal content displays the following SQL code:

```
EDIT      TRT109.CICS.RESEARCH(YT000097) - 01.28      Columns 00001 00
002600      EXEC SQL
002700      DECLARE SEARCH1 CURSOR FOR
002800      SELECT WORD1
002900      FROM TRT109WORD_PREDICT
003000      WHERE WORD1 LIKE :WS-WORD2
003100      END-EXEC.
```

Fig 1.3: Screen showing cursor code to fetch the data

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT      TRT109.CICS.RESEARCH(YT000097) - 01.28      Columns 00001 0007
015300    FETCH-PARA-EXIT.
015400          EXIT.
015500    INSERT-PARA.
015501          MOVE INPUT1I TO H7-WORD1
015502          EXEC SQL
015510          INSERT INTO TRT109WORD_PREDICT
015520          (WORD1)
015530          VALUES
015540          (:H7-WORD1)
015550          END-EXEC
015560          IF SQLCODE = 0
015570              MOVE 'DATA IS INSERTED SUCCESSFULLY' TO MESSAGO
015580          ELSE
015590              MOVE 'DATA IS NOT INSERTED SUCCESSFULL' TO MESSAGO
015591          END-IF.
015600    INSERT-PARA-EXIT.
015700          EXIT.
```

Fig 1.4: Code to insert new words in to the database

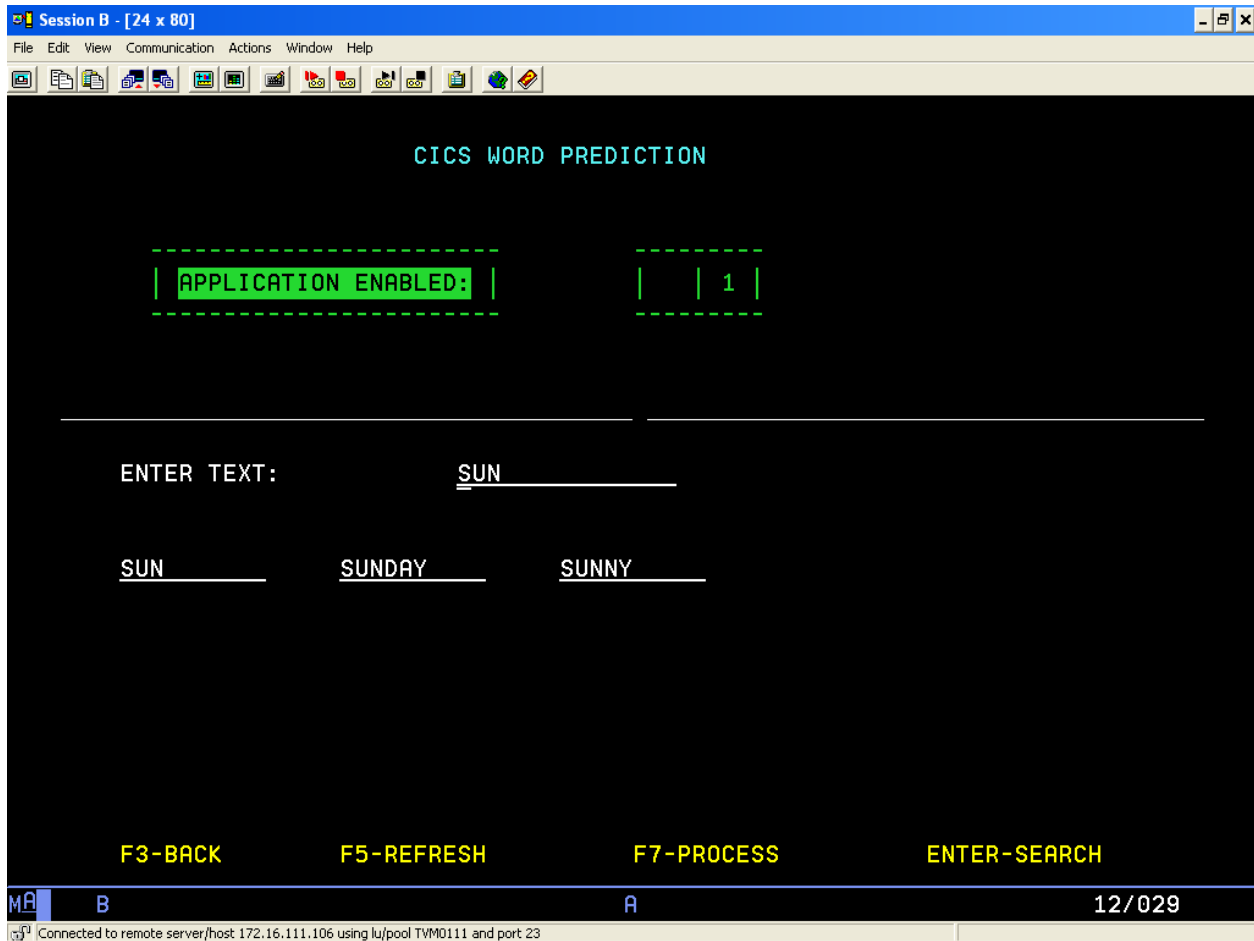


Fig 1.5: Screen showing prediction of word

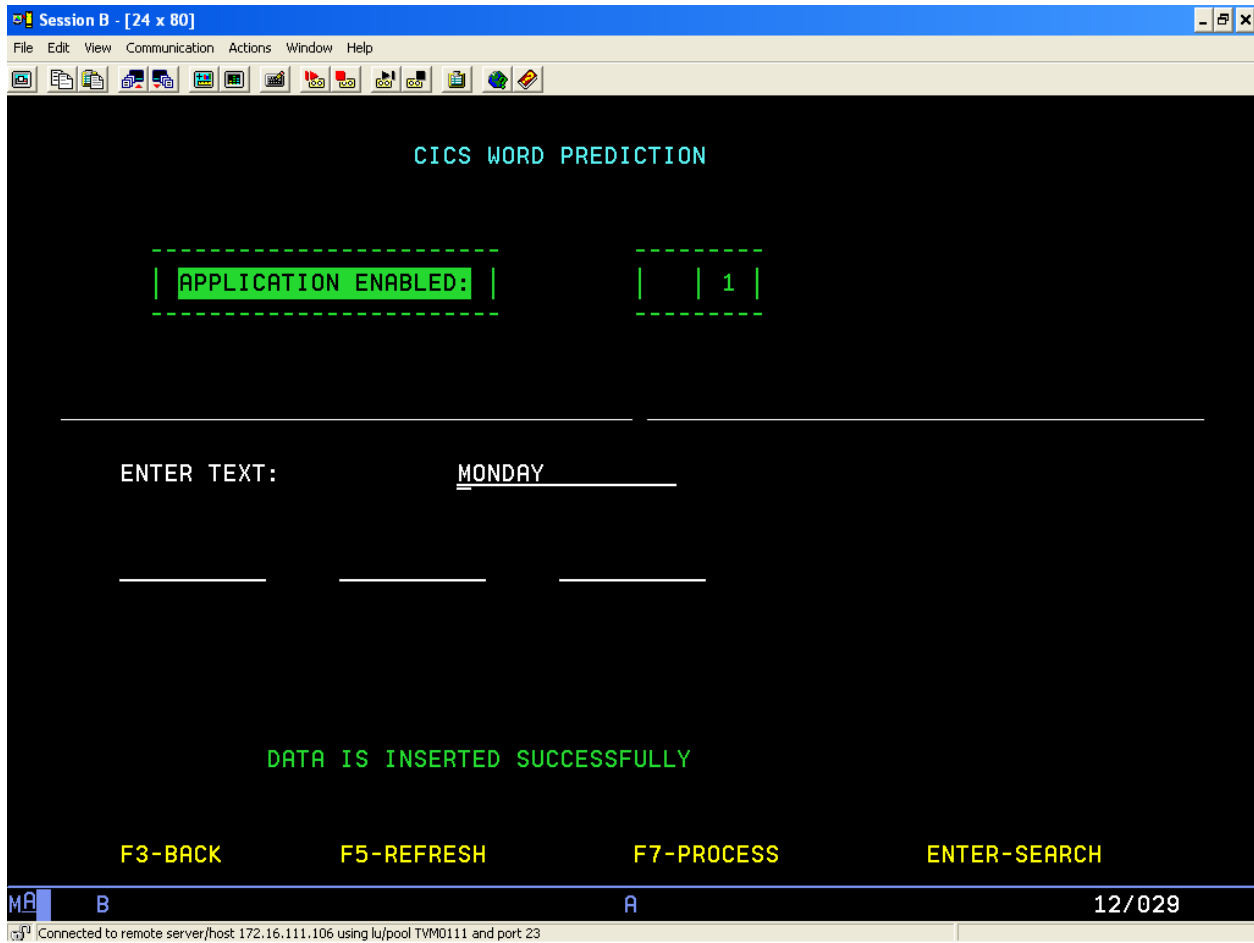


Fig 1.6: Screen showing new word inserted successfully into the database

I. 4. CONCLUSION

Every user wishes predictive searching in his/her application specially after the way Google has modernized and aimed our needs too high. Therefore, we have tried to implement the predictive searching in CICS application.

Although, up till now our application supports searching up to three words, but that can be enhanced further. The main intention while working for this application was implementing word prediction and inserting new words which are not found in the database. Hence, we have implemented the basic functionality in our application of word prediction.

II. REFERENCES

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[5] Continuous guidance by our Technical lead Mr. Robin Tommy, Tata Consultancy Services.